

IN THE SPECIFICATION:

Please amend the specification as follows:

Please substitute the paragraph beginning at page 2, line 20, with the following.

-- However, the conventional method cannot cope with changes in combinations of exposure apparatuses or the distortion of a master pattern because the target position of the master or substrate stage is corrected in accordance with a fixed polynomial. The conventional method, therefore, suffers from a low overlay accuracy. --

Please substitute the paragraph beginning at page 3, line 22, with the following.

-- The controlled element includes, e.g., a stage which moves ~~with~~ while holding the substrate or the master in an exposure operation, and in the transfer step, the master pattern is transferred onto the substrate by a scanning exposure method while the stage is moved. --

Please substitute the paragraph beginning at page 6, line 7, and ending on page 7, line 2, with the following.

-- According to the sixth aspect of the present invention, there is provided ~~an~~ a device manufacturing method comprising the first coating step of coating a substrate with a first resist, the first exposure step of transferring a first master pattern onto the substrate coated with the first resist, the first developing step of developing the substrate bearing the first master pattern, the second coating step of coating the developed substrate with a second resist, the second exposure step of transferring a second master pattern onto the substrate coated with the second resist, and

the second developing step of developing the substrate bearing the second master pattern. The second exposure step includes the correction step of correcting a target locus of a controlled element concerning exposure operation on the basis of correction information corresponding to a shape characteristic of the second master pattern and/or a shape characteristic of a pattern formed on the substrate after the first developing step, and the transfer step of transferring the second master pattern onto the substrate while moving the controlled element toward the corrected target locus. --

Please substitute the paragraph beginning at page 8, line 9, with the following.

-- Fig. 5 is a block diagram showing a detailed arrangement of an overlay correction unit and a subtractor in Fig. 3; --

Please substitute the paragraph beginning at page 9, line 7, with the following.

-- Fig. 12 is a flow chart showing manufacturing flow for a microdevice (e.g., a semiconductor chip such as an IC or LSI, a liquid crystal panel, a CCD, a thin-film magnetic head, a micromachine, or the like); and --

Please substitute the paragraph beginning at page 10, line 18, and ending on page 11, line 8, with the following.

-- One-dimensionally movable TTL scopes 8 measure the X-, Y- and Z-axis positions of an alignment mark formed on a reference mark 19 on the reticle 6, wafer 21, or wafer stage 16 on

the basis of the absolute position references of the TTL scopes 8. Relay lenses 7 are used to adjust the focuses of the TTL scopes 8. The focus of an object to be detected (position in the Z-axis direction) can be measured by referring to the positions of the relay lenses 7 while the alignment mark is in the best in-focus state. In Fig. 1, two TTL scopes 8 are arranged in the Y direction for illustrative convenience. In practice, another TTL scope is arranged in the X direction. This arrangement enables measuring tilts in ω_x and ω_y directions between the reticle alignment mark and the wafer 21 or reference mark 19. The TTL scopes 8 shown in Fig. 1 can be driven toward the center of a field angle (Y-axis direction). --

Please substitute the paragraph beginning at page 19, line 27, and ending on page 20, line 27, with the following.

-- The present inventors have made extensive studies to find out that the difference in controlled ~~variable~~ variables due to the difference in scan direction (so-called scan direction difference) occurs by several nm when processing shifts to exposure with a small relative sync error between the wafer stage 16 and the reticle stage 5, or when the lens barrel surface plate 13 deforms owing to load variations at the position of the reticle stage 5. The overlay accuracy can be increased by reducing the influence of the scan direction difference as a shift generated when forward scanning exposure and reverse scanning exposure are done at the same target value of the shot center, or by positively correcting the shot shape and central shot position in order to establish mix-and-match for a wafer exposed by another type of scanning exposure apparatus which suffers from various shot distortions in accordance with the scan position. The direction

overlay correction table may be set in accordance with a reticle used, or may be selected from direction overlay correction tables registered for respective reticles in accordance with a reticle used. If the scan direction difference or shot distortion tends to change depending on the scan speed, the direction overlay correction table may be set in accordance with the scan speed, or a direction overlay correction table corresponding to the scan speed may be selected from direction overlay correction tables registered for respective scan speeds. --

Please substitute the paragraph beginning at page 23, line 8, with the following.

-- Also, when a function which connects correction values formed based on the overlay correction table has a complicated shape with many sharp ~~flexions~~ inflections, the wafer stage 16 does not follow the target value, increasing the sync error. To prevent this, the shift amount at each point is approximated by a low-order polynomial, and the coefficient value of the approximate expression is held for each reticle, instead of holding the shift amount at each point for each reticle in the above-mentioned table form. --

Please substitute the paragraph beginning at page 23, line 18, and ending on page 24, line 7, with the following.

-- Fig. 8 is a view showing an example of a user interface for setting the direction overlay correction table. This user interface is provided by software installed in a terminal connected to the exposure apparatus. To define one direction overlay correction table, the user interface allows setting the origin of table data common to respective control axes, the data interval, and

the ~~max~~ maximum number of data. In the example shown in Fig. 8, ~~20~~ twenty data (data 0 to data19) can be set per axis at a maximum. The data interval and the number of data are typically defined to cover the exposure shot range or the range including the pre-scan region in addition to the exposure shot region. Entry of data exceeding the ~~max~~ maximum number of data is ignored. In one direction overlay correction table, data entries for six axes are preferably prepared for each of the two scan directions. --

Please substitute the paragraph beginning at page 24, line 9, with the following.

-- The direction overlay correction table is used ~~1)~~ (1) to ensure the absolute shape and layout reproducibility of the shot in the exposure apparatus (i.e., to correct an alignment error caused by the machine), ~~2)~~ (2) to correct a mask deformation or manufacturing error (this appears as a shape characteristic such as the distortion of a pattern formed on the mask) (i.e., to correct an alignment error caused by the mask), and ~~3)~~ (3) to positively distort a pattern to be transferred or change the central position in accordance with the shape characteristic such as the distortion of a pattern formed on a wafer to be exposed (i.e., to correct an alignment error caused by the process). --

Please substitute the paragraph beginning at page 29, line 3, with the following.

-- In step S1102, the control device loads a reticle parameter file corresponding to a reticle designated in the job file. This reticle parameter file describes parameters depending on the reticle, e.g., reticle alignment mark information and the exposure light transmittance of the

reticle. The reticle parameter file preferably includes the above-described direction overlay correction table. By giving the reticle parameter file the direction overlay correction table, the target positions (target locus) of the wafer stage 16 can be corrected in scanning exposure for each reticle. Also, when the direction overlay correction table is loaded as another file in accordance with the reticle designated in the job file, the target positions (target locus) of the wafer stage can be corrected in scanning exposure for each reticle. --

Please substitute the paragraph beginning at page 31, line 10, with the following.

-- Fig. 12 is a flow chart showing a manufacturing flow for a microdevice (e.g., a semiconductor chip such as an IC or LSI, a liquid crystal panel, a CCD, a thin-film magnetic head, a micromachine, or the like). In step 1 (circuit design), a semiconductor device circuit is designed. --

Please substitute the paragraph beginning at page 32, line 7, with the following.

-- In step 3 (wafer formation), a wafer is formed by using a material such as silicon. In step 4 (wafer process), called a pre-process, an actual circuit is formed on the wafer by lithography including the step of setting the reticle in the exposure apparatus and transferring the reticle pattern onto the wafer while correcting the target value of a controlled element such as the stage in accordance with the reticle. Step 5 (assembly), called a post-process, is the step of forming a semiconductor chip by using the wafer formed in step 4, and includes an assembly process (dicing and bonding), and a packaging process (chip encapsulation). In step 6

(inspection), inspections such as the operation confirmation test and durability test of the semiconductor device manufactured in step 5 are conducted. After these steps, the semiconductor device is completed and shipped (step 7). --